

**WHAT IS CLAIMED IS:**

1. A photoconductive imaging member comprised of a photogenerating layer and a charge transport layer, and wherein the charge transport layer contains a polymeric solid acid.

2. A photoconductive imaging member in accordance with **claim 1** and wherein said polymeric solid acid is a copolymer present in an amount of from about 0.0001 to about 20 percent by weight.

3. A photoconductive imaging member in accordance with **claim 1** and wherein said polymeric acid is a copolymer present in an amount of from about 0.01 to about 20 percent by weight.

4. A photoconductive imaging member in accordance with **claim 1** and wherein said polymeric acid is present in an amount of from about 0.04 to about 10 percent by weight.

5. A photoconductive imaging member in accordance with **claim 1** and wherein said polymeric acid is present in an amount of from about 0.1 to about 5 percent by weight.

6. A photoconductive imaging member in accordance with **claim 1** wherein said polymeric acid possesses a weight average molecular weight of from about 500 to about 100,000.

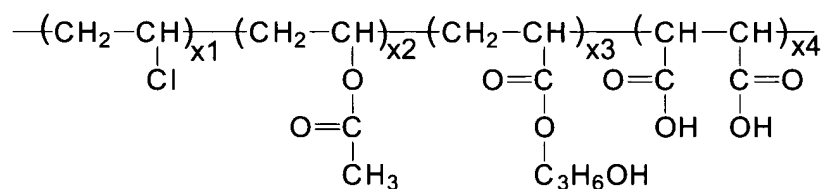
7. A photoconductive imaging member in accordance with **claim 1** wherein said polymeric acid possesses a weight average molecular weight of from about 1,000 to about 50,000.

8. A photoconductive imaging member in accordance with **claim 1** wherein said polymeric acid is a copolymer that possesses a number average molecular weight of from about 300 to about 90,000.

9. A photoconductive imaging member in accordance with **claim 1** wherein said polymeric acid is a copolymer that possesses a number average molecular weight of from about 800 to about 40,000.

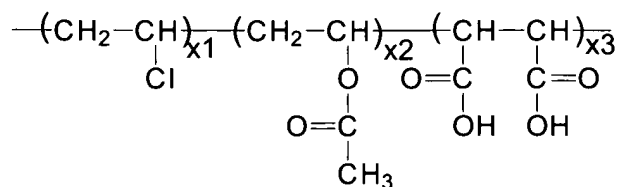
10. A photoconductive imaging member in accordance with **claim 1** wherein said polymeric acid possesses a weight average molecular weight of from about 1,000 to about 50,000 and a number average molecular weight of from about 800 to about 40,000.

11. A photoconductive imaging member in accordance with **claim 1** wherein said polymeric acid is UCARMAG 527<sup>®</sup> of the formula



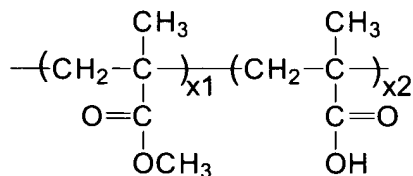
wherein  $x_1$ ,  $x_2$ ,  $x_3$  and  $x_4$  represent the molar percentage of each component in the polymer, and wherein the sum of  $x_1$ ,  $x_2$ ,  $x_3$  and  $x_4$  is equal to 1.

12. A photoconductive imaging member in accordance with **claim 1** wherein said polymeric acid is of the formula



wherein  $x_1$ ,  $x_2$ , and  $x_3$  represent the molar percentage of each component in the polymer, and the sum of  $x_1$ ,  $x_2$ , and  $x_3$  is equal to 1.

13. A photoconductive imaging member in accordance with **claim 1** wherein said polymeric acid is a copolymer of poly(methyl methacrylate-co-methacrylic acid) of the formula



where  $x_1$  and  $x_2$  are the molar percentage of each component in the polymer, and the sum of  $x_1$  and  $x_2$  is equal to 1.

14. A photoconductive imaging member in accordance with **claim 1** wherein said polymeric acid is a copolymer of poly(ethylene-co-acrylic acid), poly(ethylene-co-methacrylic acid), poly(1,6-hexanedio/neopentyl glycol-alt-adipic acid), poly(3-hydroxybutyric acid), poly(3-hydroxybutyric-co-3-hydroxyvaleic acid), poly(4-hydroxy benzoic acid-co-ethylene terephthalate), poly(methyl methacrylate-co-methacrylic acid), poly(methyl vinyl ether-alt-maleic acid), poly(styrene-co-maleic acid) ester, poly(vinyl chloride-co-vinyl acetate-co-maleic acid) (VMCH<sup>®</sup>), or poly(vinyl chloride-co-vinyl acetate-co-2-hydroxypropyl acrylate-co-maleic acid).

15. A photoconductive imaging member in accordance with **claim 1** wherein the member further contains a hole blocking layer and an optional adhesive layer.

16. An imaging member in accordance with **claim 15** wherein said hole blocking layer is a tetrakis[methylene(3,5-di-tert-butyl-4-hydroxy hydrocinnamate)]methane.

17. An imaging member in accordance with **claim 15** wherein the hole blocking layer is a hydrolyzed amino silane.

18. An imaging member in accordance with **claim 15** wherein said hole blocking layer contains 4,4'-sulfonyldiphenol, 4,4'-isopropylidenediphenol, 4,4'-ethylidenebisphenol, bis(4-hydroxyphenyl)methane, 4,4'-(1,3-phenylenediisopropylidene) bisphenol, 4,4'-(1,4-phenylenediisopropylidene) bisphenol, 4,4'-cyclohexylidenebisphenol, 4,4'-(hexafluoroisopropylidene) diphenol, 1,3-benzenediol, or 1,4-benzenediol.

19. An imaging member in accordance with **claim 15** wherein said hole blocking layer contains from about 1 to about 99 weight percent of a first phenolic resin and from about 99 to about 1 weight percent of a second phenolic resin, and wherein the total thereof is about 100 percent.

20. An imaging member in accordance with **claim 15** wherein said hole blocking layer is of a thickness of about 0.01 to about 10 microns.

21. A photoconductive imaging member in accordance with **claim 1** comprised in the following sequence of a supporting substrate, a hole blocking layer, an optional adhesive layer, said photogenerating layer, and said charge transport layer, and wherein the charge transport layer is a hole transport layer.

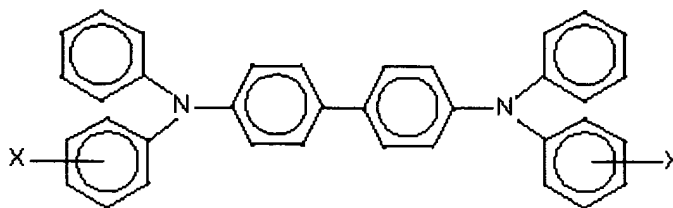
22. A photoconductive imaging member in accordance with **claim 21** wherein the adhesive layer is present and is comprised of a polyester with an  $M_w$  of about 45,000 to about 75,000, and an  $M_n$  of from about 30,000 to about 40,000.

23. A photoconductive imaging member in accordance with **claim 1** further containing a supporting substrate comprised of a conductive metal substrate of aluminum, aluminized polyethylene terephthalate or titanized polyethylene terephthalate.

24. A photoconductive imaging member in accordance with **claim 1** wherein said photogenerator layer is of a thickness of from about 0.05 to about 10 microns, and wherein said transport layer is of a thickness of from about 20 to about 75 microns.

25. A photoconductive imaging member in accordance with **claim 1** wherein said photogenerating layer is comprised of a photogenerating pigment or photogenerating pigments dispersed in a resinous binder, and wherein said pigment or pigments are present in an amount of from about 5 percent by weight to about 95 percent by weight, and optionally wherein the resinous binder is selected from the group comprised of vinyl chloride/vinyl acetate copolymers, polyesters, polyvinyl butyrals, polycarbonates, polystyrene-*b*-polyvinyl pyridine, and polyvinyl formals.

26. A photoconductive imaging member in accordance with **claim 1** wherein the charge transport layer comprises hole transport aryl amines, and which aryl amines are of the formula



wherein X is selected from the group consisting of alkyl, alkoxy, and halogen.

27. An imaging member in accordance with **claim 26** wherein the aryl amine is *N,N'*-diphenyl-*N,N'*-bis(3-methyl phenyl)-1,1'-biphenyl-4,4'-diamine.

28. A photoconductive imaging member in accordance with **claim 1** wherein the photogenerating layer is comprised of metal phthalocyanines, or metal free phthalocyanines.

29. A photoconductive imaging member in accordance with **claim 1** wherein the photogenerating layer is comprised of titanyl phthalocyanines, perylenes, or hydroxygallium phthalocyanines.

30. A photoconductive imaging member in accordance with **claim 1** wherein the photogenerating layer is comprised of Type V hydroxygallium phthalocyanine.

31. A method which comprises generating an image on the imaging member of **claim 1**, developing the latent image, and transferring the developed image to a suitable substrate.

32. A member comprised of a supporting substrate a photogenerating layer, and a charge transport layer, and wherein the charge transport layer contains a copolymeric solid acid.

33. A photoconductive imaging member comprised of a supporting substrate, an optional hole blocking layer, a photogenerating layer, and a charge transport layer, and wherein the charge transport layer contains a polymeric solid acid of poly(ethylene-co-acrylic acid), poly(ethylene-co-methacrylic acid), poly(1,6-hexanedio/neopentyl glycol-alt-adipic acid), poly(3-hydroxybutyric acid), poly(3-hydroxybutyric-co-3-hydroxyvaleic acid), poly(4-hydroxy benzoic acid-co-ethylene terephthalate), poly(methyl methacrylate-co-methacrylic acid), poly(methyl vinyl ether-alt-maleic acid), poly(styrene-co-maleic acid) ester, poly(vinyl chloride-co-vinyl acetate-co-maleic acid), or poly(vinyl chloride-co-vinyl acetate-co-2-hydroxypropyl acrylate-co-maleic acid).

34. An imaging member in accordance with **claim 11** wherein  $x$  is about 0.81,  $x_2$  is about 0.04,  $x_3$  is about 0.15, and  $x_4$  is about 0.0028.

35. An imaging member in accordance with **claim 33** wherein said blocking layer is present, and wherein said member further includes an adhesive layer.

36. A photoconductive imaging member in accordance with **claim 1** further including a rigid substrate.

37. A photoconductive imaging member in accordance with **claim 1** further including a supporting drum substrate.

38. A photoconductive imaging member in accordance with **claim 1** further including a supporting web substrate.



39. An imaging member in accordance with **claim 11** wherein  $x_1$  is from about 0.1 to about 0.8,  $x_2$  is from about 0.05 to about 0.3,  $x_3$  is from about 0.1 to about 0.4, and  $y$  is from about 0.01 to about 0.4 providing that the sum of  $x_1$ ,  $x_2$ ,  $x_3$ , and  $x_4$  is equal to 1.

40. An imaging member in accordance with **claim 12** wherein  $x_1$ ,  $x_2$ , and  $x_3$  are each from about 0.1 to about 0.9.

41. An imaging member in accordance with **claim 12** wherein  $x_1$ ,  $x_2$ , and  $x_3$  are each from about 0.05 to about 0.7.

42. An imaging member in accordance with **claim 13** wherein  $x_1$  and  $x_2$  are each from about 0.1 to about 0.8.